



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,784	10/19/2001	Lennart Stridsberg	1291-0189P	7422

2292 7590 10/03/2002

BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
----------

ELKASSABGI, HEBA

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/889,784

Applicant(s)

STRIDSBERG, LENNART

Examiner

Heba Elkassabgi

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 1-12, 14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

### ***Claim Rejections - 35 USC § 112***

Claim 12 provides for the use of an electromagnetic rotary actuator, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. For continuation of examination purposes the examiner will consider that the claim is dependent on to claim 1.

Claim 12 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Regarding claim 14, the word "means" is preceded by the words "to increase a resistance" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function.

Regarding claim 18, the word "means" is preceded by the words "comprise" and "for varying" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function.

However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

### ***Claim Objections***

The claims are objected to because the lines are crowded too closely together, making reading and entry of amendments difficult. Substitute claims with lines one and one-half or double spaced on good quality paper are required. See 37 CFR 1.52(b).

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12 is dependent upon Claim 12.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-4, 6-12,14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spiesberger et al. (U.S. Patent 4031419), Suzuki et al. (U. S. Patent 5030868) and further in view of Suzuki et al. (U. S. Patent 5030868)

Spiesberger et al. (U.S. Patent 4031419) discloses in Figures 1-5 an electromagnetic rotary actuator to be controlled by a single voltage and comprising a rotor (20) movable about an axis and having permanent magnets (20N, 20S) and a stator (21) carrying at least one winding and an air gap between facing surfaces of the permanent magnets (20) and the stator (21), the permanent magnets (20) being arranged to have flux lines extending in the air gap substantially in a radial direction from or towards the axis, characterized in that the stator (21) to have at least three pole teeth (2-7) made of a magnetically permeable material, in particular a soft-iron material, the at least one winding being applied around a central pole teeth (3,6) and the pole teeth (2,4,5,7) having end surfaces forming the facing surface of the stator (21) and thus facing surfaces of the permanent magnets (20N,20S) over the air gap. In that the end surfaces of the pole teeth (2-7) are located close to the facing surfaces of the permanent magnets (20N, 20S) creating a small air gap, At least three pole teeth (2-7) carry winding. The actuator comprises five pole teeth (2-7), the rotor (20) and stator (21)

poles have the same pitch, with an angular sector extending between the two outermost ends of the pole teeth (2-7) portions facing the air gap is longer and substantially equal than the sum of the peak to peak movement of the rotor (20) and an angular sector extending between the two outermost ends of the rotor magnet (20N, 20S) facing the air gap. Actuator having a long electric time constant the electronic circuit being connected to a winding or windings of the actuator, characterized by resistance changing means to increase a resistance in series with the actuator winding when a longer electric time constant is advantageous or required and to reduce the resistance in series with the actuator winding, when a short electric time constant is advantageous or required. However, Spiesberger et al. does not disclose pole teeth having adjustable faces.

Suzuki et al. Illustrates in Figure 5A-5E, a cylindrical surface angular sector of at least one stator pole (2-7) part facing the air gap to the rotor magnet (20N, 20S) pole parts having an adjusted shape. The two outmost stator pole (2,7) air gap surfaces have an adjusted shape to reduce the cogging torque of the actuator.

It would have been obvious to combine the electric rotary actuator of Suzuki et al. with Spiesberger et al.'s electric actuator of the stator poles having adjustable shapes in which the rotor magnet is entirely magnetized with no non-magnetized areas.

#### ***Allowable Subject Matter***

Claims 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose a rotary actuator

in that each of the stator poles carrying winding coils has a reduced height in the axial direction at places of the stator pole where the winding by permitting a portion of the stator pole located at the air gap and at a radially inner surface of the stator pole to be longer in the axial direction than a portion of stator pole located inside the stator pole winding.

Claim 15 is allowed. Prior art does not disclose an electromagnetic rotary machine with a portion of the stator pole located at the air gap and at the radially inner surface of the stator pole to be longer in the axial direction than a portion of the stator pole located inside the stator pole winding.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

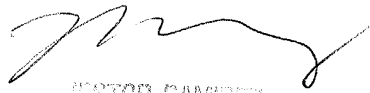
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Application/Control Number: 09/889,784  
Art Unit: 2834

Page 7

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HYE  
October 1, 2002



HECTOR RAMIREZ  
SENIOR PATENT EXAMINER  
TECHNOLOGY CENTER 2800